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## **Bowel Cancer Screening Uptake & Colorectal Cancer Diagnosis All Pathways**

### **Reducing inequalities in access to screening and diagnostic services**

A four year audit 2017 – 2020



## **Disclosure of Conflicts of Interest**

**I declare no conflict of interest in  
the last three years**



# Screening method – Faecal Immunochemical Test – FIT Kit



# Introduction

- Despite interventions to increase participation in England, most colorectal cancers (CRCs) are diagnosed outside of the screening programme.
- The aim of this study was to determine the extent to which this is due to suboptimal uptake of screening and the effect of ethnicity and gender on screening uptake and CRC diagnosis



# Methods

- We performed a clinical audit of 3229 screening participants and 1,011 patients diagnosed with CRC through all pathways at St Mark's Hospital between January 2017 and December 2020.
- Data on the diagnostic pathway, disease progression and screening history and outcomes were extracted from the National Bowel Cancer Screening System (BCSS) and the National Bowel Cancer Audit (NBOCA) submission.
- Univariate logistic regression was used to compare the involvement of lymph nodes and organs (i.e. metastatic disease) between individuals diagnosed through screening vs all other pathways.

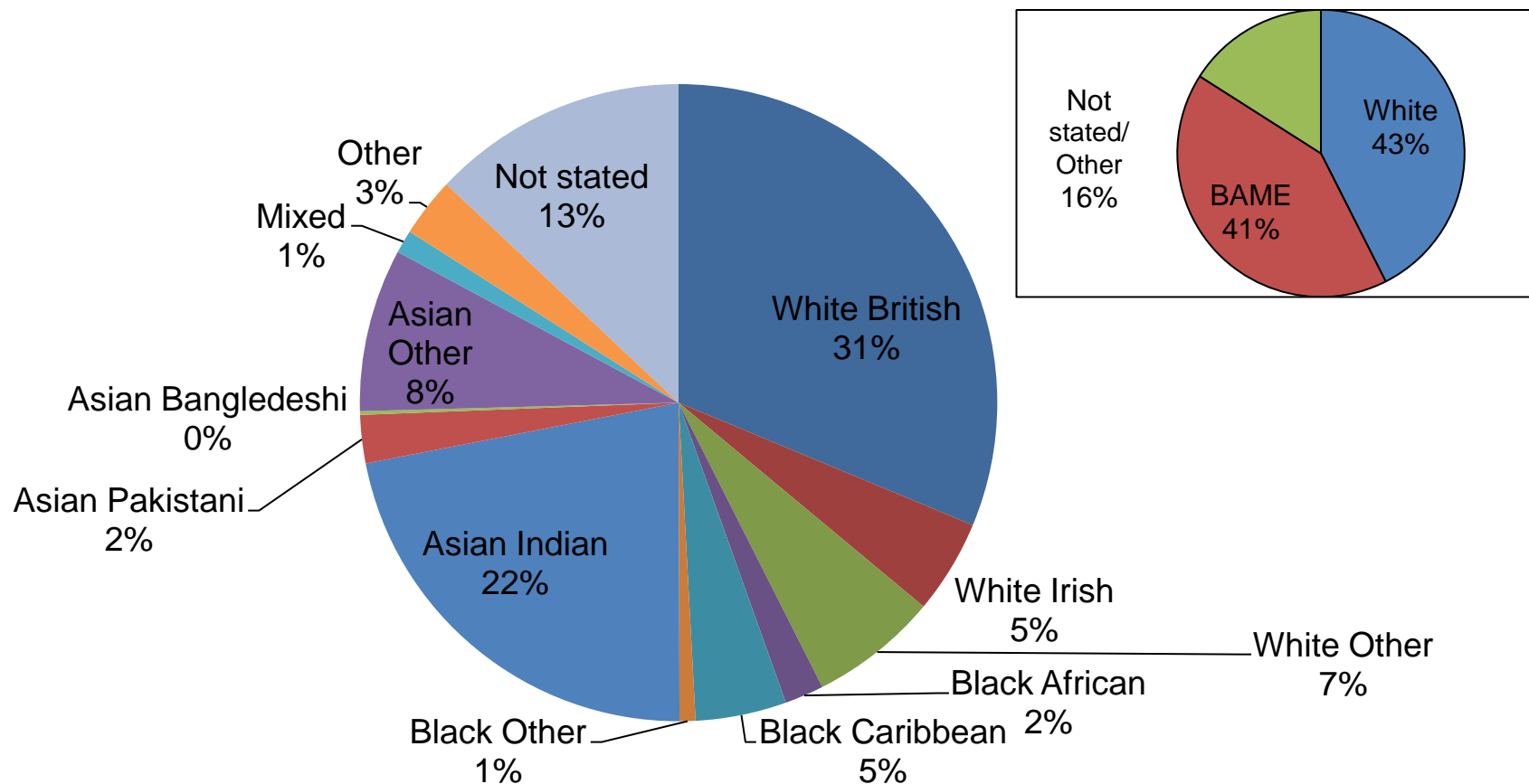


## Results – Screening

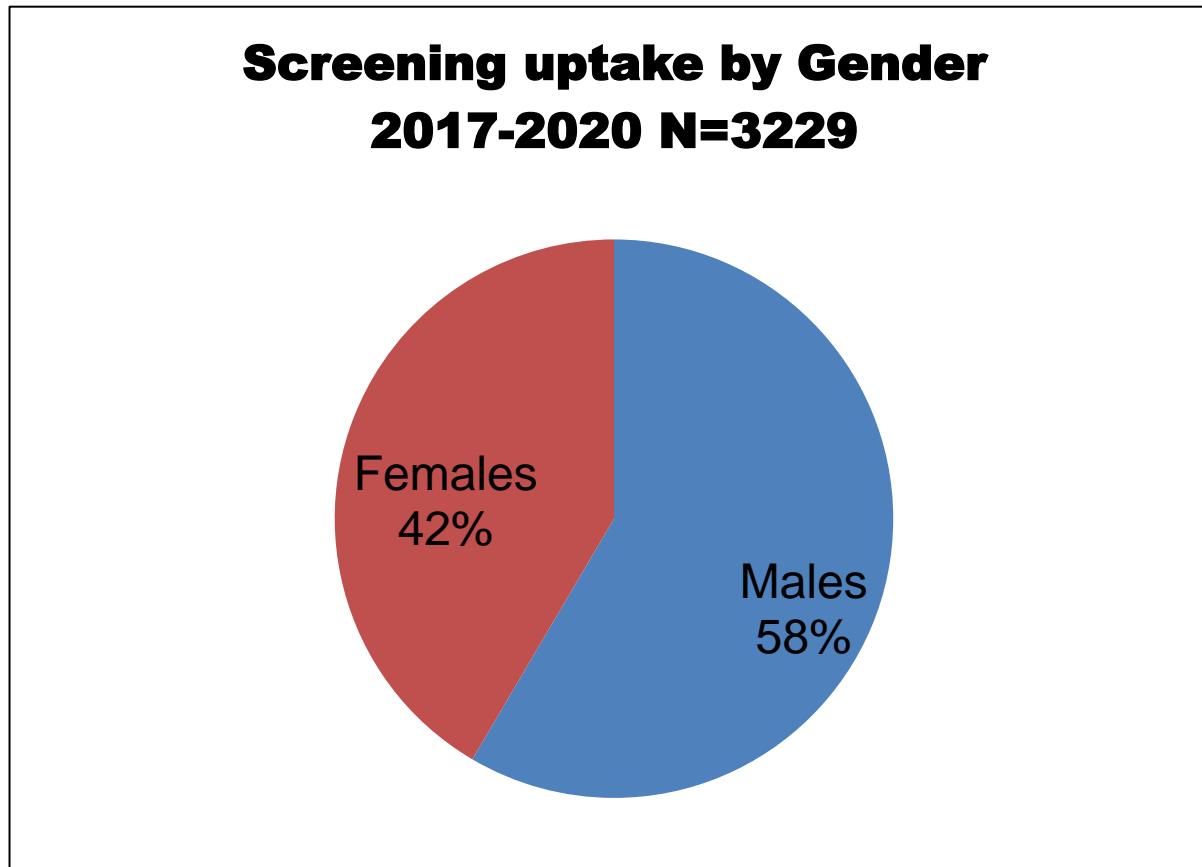
Public Health England states that screening uptake is lower in ethnic minority groups

### Screening Uptake by Ethnicity 2017 - 2020

N=3229



**National data also states that bowel screening uptake is higher for females 60.9% vs 55.5% for men**



## Results – CRC diagnoses all pathways

- Of 1,011 patients diagnosed with CRC, 446 (44.1%) were eligible for screening at the time of diagnosis
- Of these, 115 (25.8%) were diagnosed through screening.
- Among those diagnosed via non-screening pathways (n=331), 210 (63.4%) had never taken part in screening,
- 31 (9.4%) had taken part but were not up to date
- 89 (26.9%) had taken part and were up-to-date. Of those who were up-to-date (n=89), 82 (92.2%) had received a normal or weak positive test result
- 5 (5.6%) had received a positive result and declined colonoscopy.





## Results con't

- Disease progression was more advanced in patients diagnosed outside of screening.
- 50 screening and 437 non-screening patients had lymph node involvement (43.9% vs. 57.7%, respectively; OR: 0.57, 95%CI: 0.39, 0.85;  $p=0.006$ )
- 10 screening and 164 non-screening patients had metastatic disease (8.8% vs. 22.9%, respectively; OR: 0.33, 95%CI: 0.17, 0.64;  $p=0.001$ ).



## Variation in referral pathway N=1011

|                               | A&E<br>N (%) | GP<br>N (%) | Other<br>N (%) | Screening<br>N (%) |
|-------------------------------|--------------|-------------|----------------|--------------------|
| Total                         | 188 (18.6)   | 551 (54.5)  | 150 (14.8)     | 122 (12.1)         |
| <b>Gender</b>                 |              |             |                |                    |
| Female                        | 86 (20.0)    | 224 (52.0)  | 64 (14.8)      | 57 (13.2)          |
| Male                          | 102 (17.6)   | 327 (56.4)  | 86 (14.8)      | 65 (11.2)          |
| <b>Ethnicity</b>              |              |             |                |                    |
| White                         | 75 (18.2)    | 218 (52.8)  | 69 (16.7)      | 51 (12.3)          |
| South Asian                   | 31 (17.8)    | 97 (55.7)   | 30 (17.2)      | 16 (9.2)           |
| Any other Asian<br>Background | 12 (14.3)    | 42 (50.0)   | 14 (16.7)      | 16 (19.0)          |
| Any Black<br>Background       | 18 (19.1)    | 23 (54.8)   | 14 (14.9)      | 15 (16.0)          |
| Mixed / Other                 | 8 (19.0)     | 31 (46.3)   | 6 (14.3)       | 5 (11.9)           |
| Any Other White<br>Background | 18 (26.9)    | 31 (46.3)   | 7 (10.4)       | 11 (16.4)          |

| <b>Variation in Lymph Node involvement N=870</b> |                                  |  |
|--|----------------------------------|--|
|  | No lymph nodes involved<br>N (%) | 1 or more lymph nodes<br>involved<br>N (%) |
| Total  | 384 (44.1)                       | 486 (55.9)                                 |
| <b>Gender</b>                                    |                                  |  |
| Female   | 168 (45.4)                       | 202 (54.6)                                 |
| Male   | 216 (43.2)                       | 284 (56.8)                                 |
| <b>Ethnicity</b>                                 |                                  |  |
| White  | 167 (49.3)                       | 172 (50.7)                                 |
| South Asian                                      | 61 (40.1)                        | 91 (59.9)                                  |
| Any other Asian<br>Background                    | 26 (32.5)                        | 54 (67.5)                                  |
| Any Black Background                             | 29 (39.7)                        | 44 (60.3)                                  |
| Mixed / Other                                    | 22 (53.7)                        | 19 (46.3)                                  |
| Any Other White<br>Background                    | 31 (49.2)                        | 32 (50.8)                                  |



| <b>Variation in distant organ involvement (i.e. metastases)</b> |                                     |   |
|---|-------------------------------------|---|
| <b>N=827</b>  | No distant organs involved<br>N (%) | 1 or more distant organs<br>involved<br>N (%) |
| Total   | 654 (79.1)                          | 173 (20.9)                                    |
| <b>Gender</b>   |                                     |   |
| Female  | 283 (81.1)                          | 66 (18.9)                                     |
| Male  | 371 (77.6)                          | 107 (22.4)                                    |
| <b>Ethnicity</b>  |                                     |   |
| White   | 256 (79.3)                          | 67 (20.7)                                     |
| South Asian   | 118 (83.7)                          | 23 (16.3)                                     |
| Any other Asian<br>Background                                   | 57 (78.1)                           | 16 (21.9)                                     |
| Any Black Background  | 49 (68.1)                           | 23 (31.9)                                     |
| Mixed / Other   | 36 (92.3)                           | 3 (7.7)                                       |
| Any Other White<br>Background                                   | 43 (70.5)                           | 18 (29.5)                                     |

| <b>Planned Care Intent<br/>N=944</b> | Curative<br>N (%) | None-curative<br>N (%) |
|--------------------------------------|-------------------|------------------------|
| Total                                | 698 (73.9)        | 246 (26.1)             |
| <b>Gender</b>                        |                   |                        |
| Female                               | 283 (70.2)        | 120 (29.8)             |
| Male                                 | 415 (67.7)        | 126 (23.3)             |
| <b>Ethnicity</b>                     |                   |                        |
| White                                | 276 (72.6)        | 104 (27.4)             |
| South Asian                          | 132 (80.0)        | 33 (20.0)              |
| Any other Asian Background           | 56 (70.0)         | 24 (30.0)              |
| Any Black Background                 | 61 (68.5)         | 28 (31.5)              |
| Mixed / Other                        | 36 (90.0)         | 4 (10.0)               |
| Any Other White Background           | 42 (65.6)         | 22 (34.4)              |
| <b>Gender / Ethnicity</b>            |                   |                        |
| White Female                         | 111 (66.9)        | 55 (33.1)              |
| White Male                           | 165 (77.1)        | 49 (22.9)              |
| South Asian Female                   | 52 (81.3)         | 12 (18.8)              |
| South Asian Male                     | 80 (79.2)         | 21 (20.8)              |
| Any other Asian Background Female    | 23 (79.3)         | 6 (20.7)               |
| Any other Asian Background Male      | 33 (64.7)         | 18 (35.3)              |
| Any Black Background Female          | 32 (66.7)         | 16 (33.3)              |
| Any Black Background Male            | 29 (70.7)         | 12 (29.3)              |
| Mixed / Other Female                 | 10 (76.9)         | 3 (23.1)               |
| Mixed / Other Male                   | 26 (96.3)         | 1 (3.7)                |
| Any Other White Background Female    | 20 (60.6)         | 13 (39.4)              |
| Any Other White Background Male      | 22 (71.0)         | 9 (29.0)               |

# Conclusions

Identified both similarities and differences to national data concerning screening uptake and bowel cancer outcomes at a local level in outer North West London.

Identified the effect of ethnicity and gender on screening uptake and the prognosis of CRC diagnoses

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**Thank you**

